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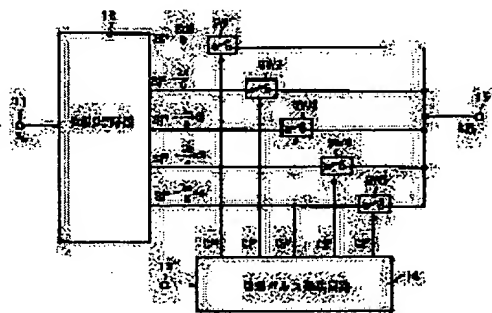
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## (54) FREQUENCY CONVERSION CIRCUIT

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To attain a constitution of high designing freedom for a frequency conversion circuit by performing the switching control to successively shift the phases in a fixed direction and synthesizing the output signals of plural switch circuits to output a frequency sum or difference signal between the 1st input signal and the switching pulses.

**SOLUTION:** The phase of a 1st input signal  $S_{in}$  inputted from a signal input terminal 11 is divided into five phases by a phase division means 12 and supplied to the switch circuits SW1 to SW5 as different channel signals  $S(5)0$  to  $S(5)4$ . At the same time, a 2nd input signal is inputted to a 2nd input signal input terminal 13 and then supplied to a switching pulse generation circuit 14 which generates the switching pulses  $C(5)0$  to  $C(5)4$  of different phases having the widths obtained by dividing a single cycle into 5 pieces. These switching pulses are supplied to the circuits SW1 to SW5 to transmit or prevent the input pulses  $C(5)0$  to  $C(5)4$ . Thus a signal  $S(5)out$  obtained by synthesizing the channel signals having the phases delayed every  $2\pi/5$ , i.e., the difference frequency is outputted to a common output terminal 15.



## LEGAL STATUS

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